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Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

December 28, 2007

Erwin Sass, General Manager
Canyon Fuel Company, LLC
P.O. Box 1029
Wellington, Utah 84542

Subject: Deficiencies for Permit Area Expansion – 560 Acres Amendment, Task ID #2873, Canyon Fuel Company, LLC, Dugout Mine, C/007/0039

Dear Mr. Sass:

The Division has reviewed your application to add an additional 560 acres to the Dugout Canyon Mine permit area.

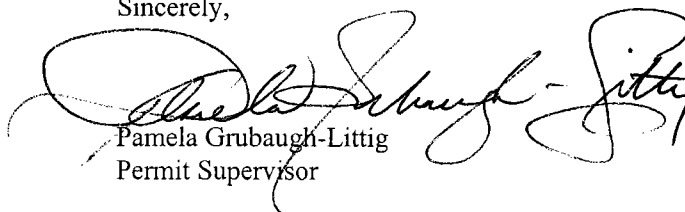
The Division has identified deficiencies that must be addressed before a determination can be made that the requirements of the R645 Coal Mining Rules have been met, and an approval can be granted and are listed as an attachment to this letter.

Each deficiency identifies its author by that author's initials in parentheses, such that your staff can directly communicate with that individual should any questions arise relative to the preparation of Canyon Fuel Company's response to that particular deficiency.

This application is being returned (except one copy that has been filed in the incoming files in the Division's Public Information Center). Please resubmit a complete and adequate application.

If you have any questions, please call me at (801) 538-5268 or Steve Christensen at (801) 538-5350.

Sincerely,



Pamela Grubaugh-Littig
Permit Supervisor

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Attachment



Deficiency List
Task ID #2873
Permit Expansion Area – 560 Acres

The members of the review team include the following individuals:

Priscilla Burton (PB)
Steve Christensen (SC)
Dave Darby (DD)
Jerriann Ernsten (JAE)
Pete Hess (PH)
Wayne Western (WW)

GEOLOGIC RESOURCE INFORMATION

R645-301-624.320 and 624.330, Prior to mining the IBC, the Permittee will provide chemical analyses for acid or toxic forming or alkalinity producing materials and their content in the strata above the coal seam, below the coal seam and the coal seam to be mined in the IBC. The parameters needed to make the assessment include; location, pH, pyritic sulfur, sulfate, organic sulfur, total sulfur, total iron, sodium absorption ratio (SAR), acid/base potential, electrical conductivity (EC), total calcium, total magnesium, total potassium, total sodium, total boron and total selenium, total arsenic, total cadmium, total chromium, total lead and total zinc. (DD)

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

R645-301- 622: The Permittee needs to submit an overburden map Plate 6-4 (October 25, 2007)
- Rock Canyon Seam/Gilson Seam Overburden Thickness map that can be read. (DD)

R645-301-521.110, The Permittee will update Plate 5-1 so that it shows the entire permit area and all known active and abandoned mine workings in or near the permit area. (WW)

R645-301-521, The Permittee will update all maps in the MRP to show the addition of the 560-acre permit expansion. For example Plate 1-2 was not updated. (WW)

R645-301-521.130, The Permittee will update the ownership maps to show the landowners within the 560-acre addition. (WW)

PERMIT APPLICATION FORMAT AND CONTENTS

R645-301-121.300, The Permittee must submit the archaeology report following proper protocol. The Division previously requested that all maps need to be submitted in color that have color-coded keys. This report does not include a map that clearly illustrates a color-coded key. (JAE)

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

R645-301-411.140, The 2007 results show that there was one archeological site observed within the area surveyed. The report does not provide a recommendation on eligibility. Although DOGM ultimately provides the eligibility determination, this information must be provided in the MRP. (JAE)

R645-301-411.142, There is no proof of “coordination effortsand clearances” from the SHPO for this extension. The Division will most likely submit, to the SHPO, a finding of “no potential to cause effects” to historic resources within or adjacent to the extension area once we receive an adequate report. The Permittee will submit a copy of the response letter to their Confidential Binder directly in front of the applicable archaeological report. (JAE)

FISH AND WILDLIFE RESOURCE INFORMATION

R645-301-322.220, The archaeology report (Sinulus 2007; SPUT 555) states that there is a salt lick just above the permit area. The DOGM would like more information about this lick – is it natural, man-made, actively being used by domestic and wild animals, and is this lick within the angel of draw? (JAE)

R645-301-322, The Permittee mentions a 2007 fly over raptor report, but did not provide the report with this Application. It is not clear to the Division whether Sections 16 W1/2 and 17 N1/2 were surveyed during the 2007 flyover survey for cliff dwellers. The Permittee must provide the 2007 report. (JAE)

R645-301-332, -333, The Permittee does not provide information concerning this expansion action and these two stands. The Division considers that the Permittee must provide a protection or mitigation plan for possible tree-nesting raptors that may be impacted by subsidence. (JE)

R645-301-330, The Permittee did not address whether there would be significant changes in operations that could change the current water consumption calculations. The Division will most likely issue a new set of guidelines that the Permittee must address for this 487-acre extension. (JE)

R645-301-333, Although the Permittee already adheres very strictly to exclusionary periods, there is no commitment in the MRP. The Permittee must provide this commitment. As standard operating procedure, the Division will always coordinate the Permittee and DWR to discuss any conflicts that may arise. This commitment must be located in the 333 section of the MRP. • The Division requires the Permittee to provide an update on the mitigation plans (two) discussed in Vol. Chap 3, Sec 322.200, pg. 3.24. This brief summary must be included just below the current insertion. (JE)

RIGHT OF ENTRY

R645-301-121.200, Calculations of surface land ownership categories of fee and "other federal lands" on pages 1-9 and 1- 10 of Section 114 should be verified for accuracy. Calculations of coal ownership acreage for federal and state leases should be checked for accuracy. (PB)

SUBSIDENCE CONTROL PLAN

R645-301-525.100 and R645-301-525.700, It appears from Plate 1-1 that landowners, George and Margaret Conover were inadvertently omitted from the subsidence survey notification. Please verify the surface ownership boundary and notify George and Margaret Conover, if their surface falls within the federal coal lease area. (PB)

COAL RECOVERY

R645-301-522, The Permittee must show that they will achieve maximum economic coal recovery on the 560-acre expansion. The Division does rely upon the Resource Recovery Protection Plan developed by the BLM in making that determination. If the Permittee included a copy of the R2P2 in the application or a letter from the BLM stating that they made a finding about maximum economic coal recovery that would help the Division make the finding. (WW)

HYDROLOGIC RESOURCE INFORMATION

R645-301-724: Baseline Data Collection (Surface and Groundwater)

The Permittee must provide data that demonstrates seasonal variation in both surface water quality and surface water quantity for the Cow Canyon and unidentified drainage located in Sections 16 and 17 respectively of the proposed permit expansion area. The Division's Tech 004-Water Monitoring guideline recommends two years of baseline data collection. In order to establish seasonal variation and meet the baseline requirements, a minimum of one full calendar year of data is required. In addition, in order to adequately assess the potential for mining related impacts on the drainage, the Permittee needs to establish where the perennial flow begins in these drainages relative to the mine plan and projected subsidence impacts. (SC)

The Permittee must provide additional groundwater baseline data or provide a scientifically justifiable reason for not doing so. Springs 211, 212, 213 and 214 are located within the Cow Canyon drainage. According to the approved MRP, they were sampled one time on November 21, 1998. Springs 261, 262 and 263 are located in the unidentified drainage in Section 17 and according to the approved MRP, were sampled one time on November 21, 1998. Attachment 1 of the Update to the Probable Hydrologic Consequences of Coal Mining at the Dugout Mine in Appendix 7-3 (PHC Update) contains the baseline spring field data for the proposed expansion. The spring data provided reveals that at the most, the springs were sampled two times during May and June of 2007. Some springs were sampled one time only. In addition, no sampling

points are depicted on Figure 1 of Attachment 1. Furthermore, springs 260A, 262A, 263A, 300, 301 and 320 are not depicted on 7-1 or any other figure. The Permittee must provide an accurate representation of what was sampled and where. The submitted baseline data is not adequate to demonstrate seasonal variation. (SC)

The Permittee must provide baseline data information for the water rights within the proposed permit expansion as depicted on Plate 7-2, Water Rights. Appendix 7-1 provides the general water right information obtained through the Division of Water Rights database, however, in order for the baseline data requirement to be met, data demonstrating seasonal variation in flow and quality must be submitted to the Division. Baseline data is necessary in the event that claims are made that mining activity has impacted these resources. (SC)

R645-301-725: Baseline Cumulative Impact Area

The application does not meet the Baseline Cumulative Impact Area requirements as outlined in R645-301-725. Without adequate baseline data, a characterization of the hydrologic resources (both surface and ground water) within the proposed permit expansion and adjacent areas is not possible. The Permittee must provide the hydrologic information necessary to assess the probable cumulative hydrologic impacts of the proposed coal mining activity within the proposed expansion and adjacent areas. (SC)

R645-301-728: Probable Hydrologic Consequences

The Permittee must provide a more detailed discussion (based on actual baseline data or data statistically representative of the site) as to the probable hydrologic consequences of the proposed mining activity on surface water, groundwater and water rights located within and adjacent to the proposed permit expansion. (SC)

The Update to the Probable Hydrologic Consequences of Coal Mining at the Dugout Mine in Appendix 7-3 (PHC Update) does not discuss potential impacts to either the Cow Canyon Drainage or the un-named drainage located in Section 17 of the proposed permit expansion. Based upon their location relative to longwall activity, the Permittee must specifically address the potential for impacts to these drainages in Section 3.1.1 of the PHC Update. (SC)

In addition, the PHC Update does not adequately discuss the impacts to groundwater resources. 5 springs (321, 260, 261, 262 and 263) are depicted on Plate 7-1 in the unnamed drainage of Section 17. 5 springs are depicted on Plate 7-1 in the Cow Canyon Drainage (211, 212, 213, 214 and 322). However, only three springs (260, 321 and 213) appear to be addressed/identified within the Hydrogeology section (2.8) of the PHC Update. The other springs are not identified nor their characteristics discussed. The Permittee must include these groundwater resources in the PHC Update and discuss the potential for them to be impacted by mining activity. (SC)

The potential for mining related impacts to the water rights identified on Plate 7-2 need to be addressed in the Updated PHC. (SC)

Section 2.2 of the Update To the Probable Hydrologic Consequences of Coal Mining at the Dugout Mine in Appendix 7-3, the Permittee states, "Baseline field data have been collected from surface and ground water sites in the expansion area". The submittal contains no surface water data from the proposed expansion area. The Permittee must address this discrepancy. (SC)

Section 2.3 of the Update To the Probable Hydrologic Consequences of Coal Mining at the Dugout Mine in Appendix 7-3, the Permittee states, "The 600 acre expansion sample locations are identified on PHC Update Figure 1". The submitted Figure 1 does not depict any sampling locations. The Permittee must address this discrepancy.

Section 2.7.2. of the Update To the Probable Hydrologic Consequences of Coal Mining at the Dugout Mine in Appendix 7-3 states, "The segments of drainages that will be undermined in Cow Canyon are ephemeral in nature." However, subsequent discussions with a Dugout Canyon Mine representative revealed that the perennial flow begins in the east fork of the Cow Canyon Drainage. It was further discussed that perennial flow is evident north of the confluence of the west and east forks of the Cow Canyon Drainage in the southeast quarter of Section 16. The Permittee must clarify the aforementioned statement as to the nature and location of perennial flow in the Cow Canyon Drainage. In addition, the Permittee must discuss the flow characteristics of the unnamed drainage in Section 17 of the proposed expansion area (See aforementioned deficiency regarding baseline data for surface water). (SC)

The last paragraph of Section 2.8.2.1 of the Update To the Probable Hydrologic Consequences of Coal Mining at the Dugout Mine in Appendix 7-3 states "Two new Colton springs have been added to the water monitoring plan for Dugout Mine. These two springs are 213 and 321." According to Plate 7-1, *Hydrologic Monitoring Stations* and Table 7-4, *Groundwater Monitoring Program*, spring 213 is not slated for monitoring. In addition, it's stated that Spring 213 is located in Section 22. According to Plate 7-1, Spring 213 is in section 16. The Permittee must address these discrepancies. (SC)

R645-301-722, -731: Location and Extent of Subsurface Water

The application does not meet the Maps, Plans and Cross Sections requirements for Subsurface Water Resource Maps as required by R645-301-722.100. Page 7-2 of the application provides a reference to Figure 7-1 of the approved MRP. Figure 7-1, *General Hydrostratigraphic Cross Section*, is labeled as "Modified from Lines (1985)". Upon review, the Lines, 1985 technical paper is entitled "The Ground-Water System and Possible Effects of Underground Coal Mining in the *Trail Mountain* Area, Central Utah", USGS Water Supply Paper 2259. Trail Mountain is located in the Wasatch Plateau. The Permittee offers no discussion as to how the generalized hydrogeology of the Wasatch Plateau is comparable to the Book Cliffs region where the Dugout facility is located. As required by R645-301-722.100, the Permittee should provide the appropriate cross-sections and maps that depict the "location and extent of subsurface water, if encountered, within the proposed permit or adjacent areas". As required, the cross-sections and contour maps should also include "seasonal differences of head in the different aquifers". (SC)

R645-301-731: Ground and Surface Water Monitoring

The Permittee must add additional ground and surface water monitoring points. In order to make an accurate determination as to whether mining activity has impacted the ground and surface water resources within the proposed permit expansion, additional monitoring is required. Additional monitoring points will need to be added to the relevant plates and tables that outline Dugout's water monitoring program. (SC)

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